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(71)Applicant : TORAY IND INC

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(72)Inventor : OKITA SHIGERU

SUZUKI ATSUSHI

(54) THERMOPLASTIC RESIN COMPOSITION AND MOLDING

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain a thermoplastic resin composition having excellent electroconductivity, gas barrier properties, strength, corrosion resistance and moldability, suitable for a separator for a fuel cell.

SOLUTION: This thermoplastic resin composition is obtained by compounding a thermoplastic resin with a carbon fiber and a carbon nanotube.

LEGAL STATUS

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3.In the drawings, any words are not translated.

CLAIMS

[Claim(s)]

[Claim 1] The thermoplastics constituent containing a carbon fiber and a carbon nanotube.

[Claim 2] The thermoplastics constituent according to claim 1 whose loadings of 10 – 70 % of the weight and a carbon nanotube the loadings of a carbon fiber are 0.1 – 15 % of the weight.

[Claim 3] The thermoplastics constituent according to claim 1 or 2 the number mean fiber length (L) of a carbon fiber and whose ratio (L/d) with the diameter of fiber (d) are 10–10,000.

[Claim 4] The thermoplastics constituent according to claim 1 to 3 which is more than a kind chosen from the group which thermoplastics becomes from polyolefine, a polyamide, polyacetal, non-liquid crystal polyester, polyphenylene oxide, a polycarbonate, a polyphenylene sulfide, liquid crystal polyester, a polyether ketone, a polyether ether ketone, polysulfone, polyether sulphone, polyether imide, and these blend objects.

[Claim 5] The thermoplastics constituent according to claim 1 to 3 whose thermoplastics is a polyphenylene sulfide or liquid crystal polyester.

[Claim 6] The thermoplastics constituent according to claim 1 to 3 whose thermoplastics is a polyphenylene sulfide.

[Claim 7] Mold goods which fabricate a thermoplastics constituent according to claim 1 to 6, and are obtained.

[Claim 8] Mold goods according to claim 7 the number mean fiber length (L) of the carbon fiber in mold goods and whose ratio (L/d) with the diameter of fiber (d) are 5–5,000.

[Claim 9] The separator for fuel cells which fabricates a thermoplastics constituent according to claim 1 to 6, and is obtained.

[Claim 10] The separator for fuel cells according to claim 9 the number mean fiber length (L) of the carbon fiber in mold goods and whose ratio (L/d) with the diameter of fiber (d) are 5–5,000.

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